

Author Index to Volume 149

Aechtner, P. and A. Laubereau, Vibrational dephasing of liquid carbondisulfide investigated by picosecond CARS	149 (1991) 419
Antonetti, A., see Y. Gauduel	149 (1990) 1
Bacchus-Montabonel, M.C. and M. Druetta, Ab initio molecular treatment for single and double electron capture in the $\text{He}^{2+} + \text{He}(1s^2)$ collision	149 (1991) 333
Ballantine, J.A., see M.L. Langford	149 (1991) 445
Barbara, P.F., see T.J. Kang	149 (1990) 81
Barrat, J.-L., J.-N. Roux and J.-P. Hansen, Diffusion, viscosity and structural slowing down in soft sphere alloys near the kinetic glass transition	149 (1990) 197
Billing, G.D., see G. Jolicard	149 (1991) 261
Börjesson, L., M. Elmroth and L.M. Torell, Neutron and light scattering study of relaxation dynamics in a glass-forming fragile molecular liquid	149 (1990) 209
Brooks, J.T. and M.E. Cates, Phase equilibria of polymer-containing droplet microemulsions	149 (1990) 97
Bruna, P.J. and S.D. Peyerimhoff, Ab initio study of the cyclic, bridge-bonded and terminal-bonded isomers of P_4S	149 (1991) 325
Bunker, P.R., see A. Karpfen	149 (1991) 299
Butz, T., Th. Völkel and O. Nuyken, Nuclear quadrupole interaction of ^{199m}Hg mercaptides	149 (1991) 437
Cates, M.E., see J.T. Brooks	149 (1990) 97
Chandler, D., see M.A. Wilson	149 (1990) 11
Chen, S.-H., see X.-H. Guo	149 (1990) 129
Curro, J.G., see K.S. Schweizer	149 (1990) 105
Dargelos, A., see A. Márquez	149 (1991) 311
Dargelos, A., see M. Gelizé	149 (1991) 319
Dashevskaya, E.I., R. Düren and E.E. Nikitin, Semiclassical rotonic description of right-left scattering asymmetry of helicopter-oriented atoms	149 (1991) 341
Davis, H.T., see W.C. Kung	149 (1990) 141
De Schryver, F.C., see B. Verschueren	149 (1991) 385
Dijkhuis, B., see T.C.M. Horn	149 (1991) 275
Druetta, M., see M.C. Bacchus-Montabonel	149 (1991) 333
Düren, R., see E.I. Dashevskaya	149 (1991) 341
Elmroth, M., see L. Börjesson	149 (1990) 209
Fernández Sanz, J., see A. Márquez	149 (1991) 311
Fernández Sanz, J., see M. Gelizé	149 (1991) 319
Fillaux, F., H. Ouboumour, J. Tomkinson and L.T. Yu, An inelastic neutron scattering study of the proton dynamics in $\gamma\text{-MnO}_2$	149 (1991) 459
Fonseca, T., see T.J. Kang	149 (1990) 81

Author Index to Volume 149

Aechtner, P. and A. Laubereau, Vibrational dephasing of liquid carbondisulfide investigated by picosecond CARS	149 (1991) 419
Antonetti, A., see Y. Gauduel	149 (1990) 1
Bacchus-Montabonel, M.C. and M. Druetta, Ab initio molecular treatment for single and double electron capture in the $\text{He}^{2+} + \text{He}(1s^2)$ collision	149 (1991) 333
Ballantine, J.A., see M.L. Langford	149 (1991) 445
Barbara, P.F., see T.J. Kang	149 (1990) 81
Barrat, J.-L., J.-N. Roux and J.-P. Hansen, Diffusion, viscosity and structural slowing down in soft sphere alloys near the kinetic glass transition	149 (1990) 197
Billing, G.D., see G. Jolicard	149 (1991) 261
Börjesson, L., M. Elmroth and L.M. Torell, Neutron and light scattering study of relaxation dynamics in a glass-forming fragile molecular liquid	149 (1990) 209
Brooks, J.T. and M.E. Cates, Phase equilibria of polymer-containing droplet microemulsions	149 (1990) 97
Bruna, P.J. and S.D. Peyerimhoff, Ab initio study of the cyclic, bridge-bonded and terminal-bonded isomers of P_4S	149 (1991) 325
Bunker, P.R., see A. Karpfen	149 (1991) 299
Butz, T., Th. Völkel and O. Nuyken, Nuclear quadrupole interaction of ^{199m}Hg mercaptides	149 (1991) 437
Cates, M.E., see J.T. Brooks	149 (1990) 97
Chandler, D., see M.A. Wilson	149 (1990) 11
Chen, S.-H., see X.-H. Guo	149 (1990) 129
Curro, J.G., see K.S. Schweizer	149 (1990) 105
Dargelos, A., see A. Márquez	149 (1991) 311
Dargelos, A., see M. Gelizé	149 (1991) 319
Dashevskaya, E.I., R. Düren and E.E. Nikitin, Semiclassical rotonic description of right-left scattering asymmetry of helicopter-oriented atoms	149 (1991) 341
Davis, H.T., see W.C. Kung	149 (1990) 141
De Schryver, F.C., see B. Verschueren	149 (1991) 385
Dijkhuis, B., see T.C.M. Horn	149 (1991) 275
Druetta, M., see M.C. Bacchus-Montabonel	149 (1991) 333
Düren, R., see E.I. Dashevskaya	149 (1991) 341
Elmroth, M., see L. Börjesson	149 (1990) 209
Fernández Sanz, J., see A. Márquez	149 (1991) 311
Fernández Sanz, J., see M. Gelizé	149 (1991) 319
Fillaux, F., H. Ouboumour, J. Tomkinson and L.T. Yu, An inelastic neutron scattering study of the proton dynamics in $\gamma\text{-MnO}_2$	149 (1991) 459
Fonseca, T., see T.J. Kang	149 (1990) 81

Freiberg, A., see T. Pullerits	149 (1991) 409
Fuchs, M., W. Götze and A. Latz, Some comments on the α -relaxation dynamics of supercooled CaKNO ₃	149 (1990) 185
Gauduel, Y., S. Pommeret, A. Migus and A. Antonetti, Some evidence of ultrafast H ₂ O ⁺ -water molecule reaction in femtosecond photoionization of pure liquid water: influence on geminate pair recombination dynamics	149 (1990) 1
Gelizé, M., see A. Márquez	149 (1991) 311
Gelizé, M., A. Dargelos, A. Márquez and J. Fernández Sanz, Ab initio calculations of molecular and electronic structure of disilane. II. Photoelectron and vacuum UV electronic spectra	149 (1991) 319
Goates, S.R., see S.M. Silence	149 (1990) 233
Götze, W., see M. Fuchs	149 (1990) 185
Guo, X.-H. and S.-H. Chen, The structure and thermodynamics of protein-SDS complexes in solution and the mechanism of their transports in gel electrophoresis process	149 (1990) 129
Hansen, J.-P., see J.-L. Barrat	149 (1990) 197
Hansson, Ö., see B. Källerbring	149 (1991) 361
Harris, C.B., see M.E. Paige	149 (1990) 37
Harris, F.M., see M.L. Langford	149 (1991) 445
Harris, J.G. and F.H. Stillinger, Fundamental aspects of chemical kinetics in condensed phases	149 (1990) 63
Heitzsch, O. and W. Lorenz, Quantum simulation of non-separable vibrations and Franck-Condon overlap: ground state and low excited states	149 (1991) 353
Horn, T.C.M., A.W. Kleyn and B. Dijkhuis, Catastrophes and classical surface scattering	149 (1991) 275
Huston, A.L. and C.T. Reimann, Photochemical bleaching of adsorbed rhodamine 6G as a probe of binding geometries on a fused silica surface	149 (1991) 401
Inokuchi, H., see E.A. Silinsh	149 (1991) 373
Jarzeba, W., see T.J. Kang	149 (1990) 81
Jensen, P., see A. Karpfen	149 (1991) 299
Johari, G.P., see E. Muzeau	149 (1990) 173
Jolicard, G. and G.D. Billing, Energy dependence study of vibrational inelastic collisions using the wave operator theory and an analysis of quantum flows in momentum space	149 (1991) 261
Jonas, J., see G. Liu	149 (1990) 165
Källerbring, B. and Ö. Hansson, A theoretical study of the effect of charge recombination on the transfer and trapping of excitation energy in photosynthesis	149 (1991) 361
Kang, T.J., W. Jarzeba, P.F. Barbara and T. Fonseca, A photodynamical model for the excited state electron transfer of bianthryl and related molecules	149 (1990) 81
Karpfen, A., P.R. Bunker and P. Jensen, An ab initio study of the hydrogen chloride dimer: the potential energy surface and the characterization of the stationary points	149 (1991) 299
Kleyn, A.W., see T.C.M. Horn	149 (1991) 275
Kung, W.C., L.E. Scriven and H.T. Davis, Wetting transitions and surface critical phenomena at solid-fluid interfaces	149 (1990) 141

- Langford, M.L., F.M. Harris, C.J. Reid, J.A. Ballantine and D.E. Parry, Triplet-state energy levels of CO_2^{2+} , COS^{2+} and CS_2^{2+} 149 (1991) 445
- Latz, A., see M. Fuchs 149 (1990) 185
- Laubereau, A., see P. Aechtner 149 (1991) 419
- Li, Y., see G. Liu 149 (1990) 165
- Liu, G., M. Mackowiak, Y. Li and J. Jonas, NMR deuteron relaxation study of low-dimensional effects in molecular liquids in restricted geometries 149 (1990) 165
- Lorenz, W., see O. Heitzsch 149 (1991) 353
- Mackowiak, M., see G. Liu 149 (1990) 165
- Markel, F., see A.B. Myers 149 (1990) 21
- Márquez, A., J. Fernández Sanz, M. Gelizé and A. Dargelos, Ab initio calculations of molecular and electronic structure of disilane. I. Molecular force field and vibrational spectrum 149 (1991) 311
- Márquez, A., see M. Gelizé 149 (1991) 319
- Migus, A., see Y. Gauduel 149 (1990) 1
- Muzeau, E. and G.P. Johari, The mechanical spectra of β -relaxation and spontaneous densification effects in an amorphous polymer 149 (1990) 173
- Myers, A.B. and F. Markel, Vibrational dephasing and frequency shifts for highly excited vibrations of methyl iodide in solution 149 (1990) 21
- Nelson, K.A., see S.M. Silence 149 (1990) 233
- Nikitin, E.E., see E.I. Dashevskaya 149 (1991) 341
- Nuyken, O., see T. Butz 149 (1991) 437
- Ouboumour, H., see F. Filliaux 149 (1991) 459
- Paige, M.E. and C.B. Harris, Ultrafast studies of chemical reactions in liquids: validity of gas phase vibrational relaxation models and density dependence of bound electronic state lifetimes 149 (1990) 37
- Parry, D.E., see M.L. Langford 149 (1991) 445
- Petrov, A.K., see A.B. Vakhtin 149 (1991) 427
- Peyerimhoff, S.D., see P.J. Bruna 149 (1991) 325
- Pommeret, S., see Y. Gauduel 149 (1990) 1
- Pullerits, T. and A. Freiberg, Picosecond fluorescence of simple photosynthetic membranes: evidence of spectral inhomogeneity and directed energy transfer 149 (1991) 409
- Reid, C.J., see M.L. Langford 149 (1991) 445
- Reimann, C.T., see A.L. Huston 149 (1991) 401
- Roux, J.-N., see J.-L. Barrat 149 (1990) 197
- Schweizer, K.S. and J.G. Curro, RISM theory of polymer liquids: analytical results for continuum models of melts and alloys 149 (1990) 105
- Scriven, L.E., see W.C. Kung 149 (1990) 141
- Silinsh, E.A. and H. Inokuchi, On charge carrier photogeneration mechanisms in organic molecular crystals 149 (1991) 373
- Silinsh, E.A. and H. Inokuchi, On charge carrier photogeneration mechanisms in organic molecular crystals 149 (1990) 233
- Silinsh, E.A. and H. Inokuchi, On charge carrier photogeneration mechanisms in organic molecular crystals 149 (1991) 373

Stillinger, F.H., see J.G. Harris	149 (1990) 63
Tomkinson, J., see F. Filliaux	149 (1991) 459
Torell, L.M., see L. Börjesson	149 (1990) 209
Ullo, J. and S. Yip, Dynamical correlations in a binary metastable fluid	149 (1990) 221
Vakhtin, A.B. and A.K. Petrov, Absolute rate constants of $R + NO(+M) \rightarrow RNO(+M)$ reactions ($R = C_3F_7, CF_3, CH_3$) at $T = 295$ K measured by time-resolved intracavity absorption of He-Ne laser radiation	149 (1991) 427
Van der Auweraer, M., see B. Verschueren	149 (1991) 385
Verschueren, B., M. Van der Auweraer and F.C. De Schryver, A spectroscopic and photoelectrochemical investigation of xanthene dyes incorporated in Langmuir-Blodgett films	149 (1991) 385
Völkel, Th., see T. Butz	149 (1991) 437
Wilson, M.A. and D. Chandler, Molecular dynamics study of cyclohexane interconversion	149 (1990) 11
Yip, S., see J. Ullo	149 (1990) 221
Yu, L.T., see F. Filliaux	149 (1991) 459

List of Subjects

1 Methods

1.1 Theoretical

- 1.1.1 Group theory and algebras
- 1.1.2 Classical mechanics *
- 1.1.3 Quantized field theory
- 1.1.4 Many body and quasiparticle approaches
- 1.1.5 Coupling schemes and perturbative treatments *
- 1.1.6 Relativistic quantum mechanics
- 1.1.7 Transport quantum mechanics *
- 1.1.8 Equilibrium statistical mechanics *
- 1.1.9 Statistical mechanics of stationary states
- 1.1.10 Non-equilibrium thermodynamic and hydrodynamic theories *
- 1.1.11 Ab initio schemes for stationary properties *
- 1.1.12 Computational and simulation methods *
- 1.1.13 Molecular dynamics and scattering theory *

1.2 Experimental

- 1.2.1 Magnetic resonances *
- 1.2.2 Cyclotron resonance
- 1.2.3 Microwave spectroscopy
- 1.2.4 Infrared spectroscopy
- 1.2.5 Raman spectroscopy *
- 1.2.6 Visible and UV spectroscopy *
- 1.2.7 Fluorescence spectroscopy *
- 1.2.8 Photoelectron and Auger spectroscopy
- 1.2.9 X-ray spectroscopy
- 1.2.10 Electron impact spectroscopy
- 1.2.11 Laser methods *
- 1.2.12 Picosecond spectroscopy *
- 1.2.13 Non-linear optical spectroscopy
- 1.2.14 Synchrotron spectroscopies
- 1.2.15 Coherent optical spectroscopy
- 1.2.16 Optical pumping
- 1.2.17 Multiple resonance spectroscopy
- 1.2.18 Optoacoustic spectroscopy
- 1.2.19 Atomic and molecular beam techniques *
- 1.2.20 Time-resolved experiments *
- 1.2.21 Mass spectrometry *
- 1.2.22 Radiolysis
- 1.2.23 Mössbauer spectroscopy
- 1.2.24 X-ray, electron and neutron diffraction
- 1.2.25 Neutron scattering *
- 1.2.26 Light scattering *
- 1.2.27 Field emission and field ionization
- 1.2.28 Measurement of macroscopic variables *

2 Objects

2.1 Bulk systems

- 2.1.1 Gases
- 2.1.2 Supersonic beams
- 2.1.3 Liquids neat *
- 2.1.4 Liquid mixtures and solutions *
- 2.1.5 Crystals
- 2.1.5.1 neat
- 2.1.5.2 mixed
- 2.1.6 Glasses *
- 2.1.7 Liquid crystals
- 2.1.8 Polymers *
- 2.1.9 Semiconductors
- 2.1.10 Metals and alloys
- 2.1.11 Thin films *
- 2.1.12 Surfaces *
- 2.1.13 Low-dimensional materials
- 2.1.14 Dielectrics
- 2.1.15 Plasmas
- 2.1.16 Biological systems *

2.2 Microscopic systems

- 2.2.1 Atoms
- 2.2.2 Molecules (neutral and ionic) *
- 2.2.2.1 diatomic *
- 2.2.2.2 small polyatomics *
- 2.2.2.3 aromatics
- 2.2.2.4 other large *
- 2.2.2.5 polymeric and biological *
- 2.2.3 Molecular aggregates *
- 2.2.3.1 dimers *
- 2.2.3.2 van der Waals molecules
- 2.2.3.3 clusters
- 2.2.3.4 complexes *
- 2.2.4 Free radicals (including hydronium and muonium) *
- 2.2.5 Quasiparticles (including excitons)
- 2.2.6 Defects and impurities
- 2.2.7 Ions and charge carriers *

* Denotes subjects covered in this volume

3 Phenomena

3.1	Molecular structure *	3.16	Multiphoton phenomena
3.2	Vibrations and rotations of molecules *	3.17	Reactions (including dissociation) *
3.3	Electronic structure and states *	3.17.1	gas phase *
3.4	Electric and magnetic properties	3.17.2	condensed phase *
3.5	Spin splittings	3.17.3	photochemical *
3.6	Optical activity	3.18	Tunnelling *
3.7	Molecular interactions *	3.19	Electron transfer *
3.8	Spectral bandshapes and intensities *	3.20	Positron annihilation
3.9	Coupling of electronic and nuclear motion *	3.21	Ionization (including Rydberg states) *
3.10	Energy transfer processes *	3.22	Molecular motion (including diffusive) *
3.11	Molecular photophysical processes *	3.23	Isotopic effects
3.12	Intramolecular dynamics *	3.24	Fluctuations and noise
3.12.1	radiationless transitions	3.25	Collective motion and excitations *
3.12.2	vibrational energy redistribution (including vibrational dissociation) *	3.26	Surface effects and catalysis *
3.13	Luminescence spectra, yields and lifetimes *	3.27	Thermodynamic and transport properties *
3.14	Coherence loss processes	3.28	Structure of solids and liquids *
3.15	Non-linear responses (including optical)	3.29	Critical phenomena *
		3.30	Phase transitions *

Subject Index to Volume 149

Methods

Theoretical

Classical mechanics

Catastrophes and classical surface scattering, T.C.M. Horn, A.W. Kleyn and B. Dijkhuis 149 (1991) 275

Coupling schemes and perturbative treatments

A photodynamical model for the excited state electron transfer of bianthryl and related molecules, T.J. Kang, W. Jarzeba, P.F. Barbara and T. Fonseca 149 (1990) 81

Transport quantum mechanics

Picosecond fluorescence of simple photosynthetic membranes: evidence of spectral inhomogeneity and directed energy transfer, T. Pullerits and A. Freiberg 149 (1991) 409

Equilibrium statistical mechanics

Fundamental aspects of chemical kinetics in condensed phases, J.G. Harris and F.H. Stillinger 149 (1990) 63

Phase equilibria of polymer-containing droplet microemulsions, J.T. Brooks and M.E. Cates 149 (1990) 97

RISM theory of polymer liquids: analytical results for continuum models of melts and alloys, K.S. Schweizer and J.G. Curro 149 (1990) 105

Non-equilibrium thermodynamic and hydrodynamic theories

Some comments on the α -relaxation dynamics of supercooled CaKNO₃, M. Fuchs, W. Götze and A. Latz 149 (1990) 185

Ab initio schemes for stationary properties

An ab initio study of the hydrogen chloride dimer: the potential energy surface and the characterization of the stationary points, A. Karpfen, P.R. Bunker and P. Jensen 149 (1991) 299

Ab initio calculations of molecular and electronic structure of disilane. I. Molecular force field and vibrational spectrum, A. Márquez, J. Fernández Sanz, M. Gelizé and A. Dargelos 149 (1991) 311

Ab initio calculations of molecular and electronic structure of disilane. II. Photoelectron and vacuum UV electronic spectra, M. Gelizé, A. Dargelos, A. Márquez and J. Fernández Sanz 149 (1991) 319

Ab initio study of the cyclic, bridge-bonded and terminal-bonded isomers of P₄S, P.J. Bruna and S.D. Peyerimhoff 149 (1991) 325

Ab initio molecular treatment for single and double electron capture in the He²⁺ + He(1s²) collision, M.C. Bacchus-Montabonel and M. Druetta 149 (1991) 333

Quantum simulation of non-separable vibrations and Franck-Condon overlap: ground state and low excited states, O. Heitzsch and W. Lorenz	149 (1991) 353
<i>Computational and simulation methods</i>	
Molecular dynamics study of cyclohexane interconversion, M.A. Wilson and D. Chandler	149 (1990) 11
Fundamental aspects of chemical kinetics in condensed phases, J.G. Harris and F.H. Stillinger	149 (1990) 63
A photodynamical model for the excited state electron transfer of bianthryl and related molecules, T.J. Kang, W. Jarzeba, P.F. Barbara and T. Fonseca	149 (1990) 81
Diffusion, viscosity and structural slowing down in soft sphere alloys near the kinetic glass transition, J.-L. Barrat, J.-N. Roux and J.-P. Hansen	149 (1990) 197
Dynamical correlations in a binary metastable fluid, J. Ullo and S. Yip	149 (1990) 221
Energy dependence study of vibrational inelastic collisions using the wave operator theory and an analysis of quantum flows in momentum space, G. Jolicard and G.D. Billing	149 (1991) 261
Quantum simulation of non-separable vibrations and Franck-Condon overlap: ground state and low excited states, O. Heitzsch and W. Lorenz	149 (1991) 353
A theoretical study of the effect of charge recombination on the transfer and trapping of excitation energy in photosynthesis, B. Källerbring and Ö. Hansson	149 (1991) 361
<i>Molecular dynamics and scattering theory</i>	
Energy dependence study of vibrational inelastic collisions using the wave operator theory and an analysis of quantum flows in momentum space, G. Jolicard and G.D. Billing	149 (1991) 261
Catastrophes and classical surface scattering, T.C.M. Horn, A.W. Kleyn and B. Dijkhuis	149 (1991) 275
Semiclassical rotonic description of right-left scattering asymmetry of helicopter-oriented atoms, E.I. Dashevskaya, R. Düren and E.E. Nikitin	149 (1991) 341
On charge carrier photogeneration mechanisms in organic molecular crystals, E.A. Silinsh and H. Inokuchi	149 (1991) 373
<i>Experimental</i>	
<i>Magnetic resonances</i>	
NMR deuteron relaxation study of low-dimensional effects in molecular liquids in restricted geometries, G. Liu, M. Mackowiak, Y. Li and J. Jonas	149 (1990) 165
<i>Raman spectroscopy</i>	
Vibrational dephasing and frequency shifts for highly excited vibrations of methyl iodide in solution, A.B. Myers and F. Markel	149 (1990) 21
<i>Visible and UV spectroscopy</i>	
Some evidence of ultrafast H_2O^+ -water molecule reaction in femtosecond photoionization of pure liquid water: influence on geminate pair recombination dynamics, Y. Gauduel, S. Pommeret, A. Migus and A. Antonetti	149 (1990) 1
A spectroscopic and photo-electrochemical investigation of xanthene dyes incorporated in Langmuir-Blodgett films, B. Verschueren, M. Van der Auweraer and F.C. De Schryver	149 (1991) 385
<i>Fluorescence spectroscopy</i>	
A spectroscopic and photo-electrochemical investigation of xanthene dyes incorporated in Langmuir-Blodgett films, B. Verschueren, M. Van der Auweraer and F.C. De Schryver	149 (1991) 385

Photochemical bleaching of adsorbed rhodamine 6G as a probe of binding geometries on a fused silica surface, A.L. Huston and C.T. Reimann

149 (1991) 401

Laser methods

Absolute rate constants of $R + NO(+M) \rightarrow RNO(+M)$ reactions ($R = C_3F_7, CF_3, CH_3$) at $T = 295$ K measured by time-resolved intracavity absorption of He-Ne laser radiation, A.B. Vakhtin and A.K. Petrov

149 (1991) 427

Picosecond spectroscopy

Ultrafast studies of chemical reactions in liquids: validity of gas phase vibrational relaxation models and density dependence of bound electronic state lifetimes, M.E. Paige and C.B. Harris

149 (1990) 37

A photodynamical model for the excited state electron transfer of bianthryl and related molecules, T.J. Kang, W. Jarzeba, P.F. Barbara and T. Fonseca

149 (1990) 81

Impulsive stimulated scattering study of normal and supercooled liquid triphenylphosphite, S.M. Silence, S.R. Goates and K.A. Nelson

149 (1990) 233

Picosecond fluorescence of simple photosynthetic membranes: evidence of spectral inhomogeneity and directed energy transfer, T. Pullerits and A. Freiberg

149 (1991) 409

Vibrational dephasing of liquid carbondisulfide investigated by picosecond CARS, P. Achtnher and A. Laubereau

149 (1991) 419

Atomic and molecular beam techniques

Semiclassical rotonic description of right-left scattering asymmetry of helicopter-oriented atoms, E.I. Dashevskaya, R. Düren and E.E. Nikitin

149 (1991) 341

Triplet-state energy levels of CO_2^{2+} , COS^{2+} and CS_2^{2+} , M.L. Langford, F.M. Harris, C.J. Reid, J.A. Ballantine and D.E. Parry

149 (1991) 445

Time-resolved experiments

Some evidence of ultrafast H_2O^+ -water molecule reaction in femtosecond photoionization of pure liquid water: influence on geminate pair recombination dynamics, Y. Gauduel, S. Pommeret, A. Migus and A. Antonetti

149 (1990) 1

Ultrafast studies of chemical reactions in liquids: validity of gas phase vibrational relaxation models and density dependence of bound electronic state lifetimes, M.E. Paige and C.B. Harris

149 (1990) 37

The mechanical spectra of β -relaxation and spontaneous densification effects in an amorphous polymer, E. Muzeau and G.P. Johari

149 (1990) 173

A theoretical study of the effect of charge recombination on the transfer and trapping of excitation energy in photosynthesis, B. Källebring and Ö. Hansson

149 (1991) 361

Photochemical bleaching of adsorbed rhodamine 6G as a probe of binding geometries on a fused silica surface, A.L. Huston and C.T. Reimann

149 (1991) 401

Nuclear quadrupole interaction of ^{199m}Hg mercaptides, T. Butz, Th. Völkel and O. Nuyken

149 (1991) 437

Mass spectrometry

Triplet-state energy levels of CO_2^{2+} , COS^{2+} and CS_2^{2+} , M.L. Langford, F.M. Harris, C.J. Reid, J.A. Ballantine and D.E. Parry

149 (1991) 445

Neutron scattering

- The structure and thermodynamics of protein-SDS complexes in solution and the mechanism of their transports in gel electrophoresis process, X.-H. Guo and S.-H. Chen 149 (1990) 129
 Neutron and light scattering study of relaxation dynamics in a glass-forming fragile molecular liquid, L. Börjesson, M. Elmroth and L.M. Torell 149 (1990) 209
 An inelastic neutron scattering study of the proton dynamics in γ -MnO₂, F. Filliaux, H. Ouboumour, J. Tomkinson and L.T. Yu 149 (1991) 459

Light scattering

- The structure and thermodynamics of protein-SDS complexes in solution and the mechanism of their transports in gel electrophoresis process, X.-H. Guo and S.-H. Chen 149 (1990) 129
 Neutron and light scattering study of relaxation dynamics in a glass-forming fragile molecular liquid, L. Börjesson, M. Elmroth and L.M. Torell 149 (1990) 209

Measurement of macroscopic variables

- Wetting transitions and surface critical phenomena at solid-fluid interfaces, W.C. Kung, L.E. Scriven and H.T. Davis 149 (1990) 141

Objects**Bulk systems***Liquids neat*

- Some evidence of ultrafast H₂O⁺-water molecule reaction in femtosecond photoionization of pure liquid water: influence on geminate pair recombination dynamics, Y. Gauduel, S. Pommeret, A. Migus and A. Antonetti 149 (1990) 1
 Wetting transitions and surface critical phenomena at solid-fluid interfaces, W.C. Kung, L.E. Scriven and H.T. Davis 149 (1990) 141
 NMR deuteron relaxation study of low-dimensional effects in molecular liquids in restricted geometries, G. Liu, M. Mackowiak, Y. Li and J. Jonas 149 (1990) 165
 Neutron and light scattering study of relaxation dynamics in a glass-forming fragile molecular liquid, L. Börjesson, M. Elmroth and L.M. Torell 149 (1990) 209
 Impulsive stimulated scattering study of normal and supercooled liquid triphenylphosphate, S.M. Silence, S.R. Goates and K.A. Nelson 149 (1990) 233
 Vibrational dephasing of liquid carbondisulfide investigated by picosecond CARS, P. Achtnier and A. Laubereau 149 (1991) 419

Liquid mixtures and solutions

- Molecular dynamics study of cyclohexane interconversion, M.A. Wilson and D. Chandler 149 (1990) 11
 Vibrational dephasing and frequency shifts for highly excited vibrations of methyl iodide in solution, A.B. Myers and F. Markel 149 (1990) 21
 Fundamental aspects of chemical kinetics in condensed phases, J.G. Harris and F.H. Stillinger 149 (1990) 63
 Phase equilibria of polymer-containing droplet microemulsions, J.T. Brooks and M.E. Cates 149 (1990) 97
 Dynamical correlations in a binary metastable fluid, J. Ullo and S. Yip 149 (1990) 221
 Vibrational dephasing of liquid carbondisulfide investigated by picosecond CARS, P. Achtnier and A. Laubereau 149 (1991) 419

Glasses

- NMR deuteron relaxation study of low-dimensional effects in molecular liquids in restricted geometries, G. Liu, M. Mackowiak, Y. Li and J. Jonas 149 (1990) 165
 Some comments on the α -relaxation dynamics of supercooled CaKNO_3 , M. Fuchs, W. Götze and A. Latz 149 (1990) 185
 Dynamical correlations in a binary metastable fluid, J. Ullo and S. Yip 149 (1990) 221
 Impulsive stimulated scattering study of normal and supercooled liquid triphenylphosphate, S.M. Silence, S.R. Goates and K.A. Nelson 149 (1990) 233

Polymers

- Phase equilibria of polymer-containing droplet microemulsions, J.T. Brooks and M.E. Cates 149 (1990) 97
 RISM theory of polymer liquids: analytical results for continuum models of melts and alloys, K.S. Schweizer and J.G. Curro 149 (1990) 105
 The mechanical spectra of β -relaxation and spontaneous densification effects in an amorphous polymer, E. Muzeau and G.P. Johari 149 (1990) 173

Thin films

- Wetting transitions and surface critical phenomena at solid-fluid interfaces, W.C. Kung, L.E. Scriven and H.T. Davis 149 (1990) 141
 A spectroscopic and photo-electrochemical investigation of xanthene dyes incorporated in Langmuir-Blodgett films, B. Verschueren, M. Van der Auweraer and F.C. De Schryver 149 (1991) 385

Surfaces

- Catastrophes and classical surface scattering, T.C.M. Horn, A.W. Kleyn and B. Dijkhuis 149 (1991) 275

Biological systems

- A theoretical study of the effect of charge recombination on the transfer and trapping of excitation energy in photosynthesis, B. Källerbring and Ö. Hansson 149 (1991) 361
 Picosecond fluorescence of simple photosynthetic membranes: evidence of spectral inhomogeneity and directed energy transfer, T. Pullerits and A. Freiberg 149 (1991) 409

*Microscopic systems**Molecules (neutral and ionic)*

- Ab initio calculations of molecular and electronic structure of disilane. I. Molecular force field and vibrational spectrum, A. Márquez, J. Fernández Sanz, M. Gelizé and A. Dargelos 149 (1991) 311
 Semiclassical rotonic description of right-left scattering asymmetry of helicopter-oriented atoms, E.I. Dashevskaya, R. Düren and E.E. Nikitin 149 (1991) 341

-diatomic

- Energy dependence study of vibrational inelastic collisions using the wave operator theory and an analysis of quantum flows in momentum space, G. Jolicard and G.D. Billing 149 (1991) 261
 Ab initio molecular treatment for single and double electron capture in the $\text{He}^{2+} + \text{He}(1s^2)$ collision, M.C. Bacchus-Montabonel and M. Druetta 149 (1991) 333

-small polyatomics

- Molecular dynamics study of cyclohexane interconversion, M.A. Wilson and D. Chandler 149 (1990) 11

Vibrational dephasing and frequency shifts for highly excited vibrations of methyl iodide in solution, A.B. Myers and F. Markel	149 (1990) 21
Ab initio calculations of molecular and electronic structure of disilane. I. Molecular force field and vibrational spectrum, A. Márquez, J. Fernández Sanz, M. Gelizé and A. Dargelos	149 (1991) 311
Ab initio calculations of molecular and electronic structure of disilane. II. Photoelectron and vacuum UV electronic spectra, M. Gelizé, A. Dargelos, A. Márquez and J. Fernández Sanz	149 (1991) 319
Ab initio study of the cyclic, bridge-bonded and terminal-bonded isomers of P ₄ S, P.J. Bruna and S.D. Peyerimhoff	149 (1991) 325
Nuclear quadrupole interaction of ^{199m} Hg mercaptides, T. Butz, Th. Völkel and O. Nuyken	149 (1991) 437

-other large

Photochemical bleaching of adsorbed rhodamine 6G as a probe of binding geometries on a fused silica surface, A.L. Huston and C.T. Reimann	149 (1991) 401
---	----------------

-polymeric and biological

The structure and thermodynamics of protein-SDS complexes in solution and the mechanism of their transports in gel electrophoresis process, X.-H. Guo and S.-H. Chen	149 (1990) 129
Nuclear quadrupole interaction of ^{199m} Hg mercaptides, T. Butz, Th. Völkel and O. Nuyken	149 (1991) 437

*Molecular aggregates**-dimers*

An ab initio study of the hydrogen chloride dimer: the potential energy surface and the characterization of the stationary points, A. Karpfen, P.R. Bunker and P. Jensen	149 (1991) 299
--	----------------

-complexes

The structure and thermodynamics of protein-SDS complexes in solution and the mechanism of their transports in gel electrophoresis process, X.-H. Guo and S.-H. Chen	149 (1990) 129
--	----------------

Free radicals (including hydronium and muonium)

Some evidence of ultrafast H ₂ O ⁺ -water molecule reaction in femtosecond photoionization of pure liquid water: influence on geminate pair recombination dynamics, Y. Gauduel, S. Pommeret, A. Migus and A. Antonetti	149 (1990) 1
--	--------------

Ions and charge carriers

Triplet-state energy levels of CO ₂ ²⁺ , COS ²⁺ and CS ₂ ²⁺ , M.L. Langford, F.M. Harris, C.J. Reid, J.A. Ballantine and D.E. Parry	149 (1991) 445
An inelastic neutron scattering study of the proton dynamics in γ -MnO ₂ , F. Filliaux, H. Ouboumour, J. Tomkinson and L.T. Yu	149 (1991) 459

Phenomena*Molecular structure*

An ab initio study of the hydrogen chloride dimer: the potential energy surface and the characterization of the stationary points, A. Karpfen, P.R. Bunker and P. Jensen	149 (1991) 299
--	----------------

- Ab initio calculations of molecular and electronic structure of disilane. I. Molecular force field and vibrational spectrum, A. Márquez, J. Fernández Sanz, M. Gelizé and A. Dargelos 149 (1991) 311
- Ab initio study of the cyclic, bridge-bonded and terminal-bonded isomers of P₄S, P.J. Bruna and S.D. Peyerimhoff 149 (1991) 325
- Ab initio molecular treatment for single and double electron capture in the He²⁺ + He(1s²) collision, M.C. Bacchus-Montabonel and M. Druetta 149 (1991) 333
- Vibrations and rotations of molecules*
- Vibrational dephasing and frequency shifts for highly excited vibrations of methyl iodide in solution, A.B. Myers and F. Markel 149 (1990) 21
- An ab initio study of the hydrogen chloride dimer: the potential energy surface and the characterization of the stationary points, A. Karpfen, P.R. Bunker and P. Jensen 149 (1991) 299
- Ab initio calculations of molecular and electronic structure of disilane. I. Molecular force field and vibrational spectrum, A. Márquez, J. Fernández Sanz, M. Gelizé and A. Dargelos 149 (1991) 311
- Ab initio study of the cyclic, bridge-bonded and terminal-bonded isomers of P₄S, P.J. Bruna and S.D. Peyerimhoff 149 (1991) 325
- Vibrational dephasing of liquid carbondisulfide investigated by picosecond CARS, P. Aechtner and A. Laubereau 149 (1991) 419
- Electronic structure and states*
- Ab initio calculations of molecular and electronic structure of disilane. II. Photoelectron and vacuum UV electronic spectra, M. Gelizé, A. Dargelos, A. Márquez and J. Fernández Sanz 149 (1991) 319
- Triplet-state energy levels of CO₂²⁺, COS²⁺ and CS₂²⁺, M.L. Langford, F.M. Harris, C.J. Reid, J.A. Ballantine and D.E. Parry 149 (1991) 445
- Molecular interactions*
- An ab initio study of the hydrogen chloride dimer: the potential energy surface and the characterization of the stationary points, A. Karpfen, P.R. Bunker and P. Jensen 149 (1991) 299
- Semiclassical rotonic description of right-left scattering asymmetry of helicopter-oriented atoms, E.I. Dashevskaya, R. Düren and E.E. Nikitin 149 (1991) 341
- Spectral bandshapes and intensities*
- Vibrational dephasing and frequency shifts for highly excited vibrations of methyl iodide in solution, A.B. Myers and F. Markel 149 (1990) 21
- Ab initio calculations of molecular and electronic structure of disilane. II. Photoelectron and vacuum UV electronic spectra, M. Gelizé, A. Dargelos, A. Márquez and J. Fernández Sanz 149 (1991) 319
- An inelastic neutron scattering study of the proton dynamics in γ -MnO₂, F. Filliaux, H. Ouboumour, J. Tomkinson and L.T. Yu 149 (1991) 459
- Coupling of electronic and nuclear motion*
- An inelastic neutron scattering study of the proton dynamics in γ -MnO₂, F. Filliaux, H. Ouboumour, J. Tomkinson and L.T. Yu 149 (1991) 459

Energy transfer processes

- Energy dependence study of vibrational inelastic collisions using the wave operator theory and an analysis of quantum flows in momentum space, G. Jolicard and G.D. Billing 149 (1991) 261
- A theoretical study of the effect of charge recombination on the transfer and trapping of excitation energy in photosynthesis, B. Källerbring and Ö. Hansson 149 (1991) 361
- Picosecond fluorescence of simple photosynthetic membranes: evidence of spectral inhomogeneity and directed energy transfer, T. Pullerits and A. Freiberg 149 (1991) 409

Molecular photophysical processes

- On charge carrier photogeneration mechanisms in organic molecular crystals, E.A. Silinsh and H. Inokuchi 149 (1991) 373
- A spectroscopic and photo-electrochemical investigation of xanthene dyes incorporated in Langmuir-Blodgett films, B. Verschueren, M. Van der Auweraer and F.C. De Schryver 149 (1991) 385

Intramolecular dynamics

- vibrational energy redistribution (including vibrational dissociation)
Molecular dynamics study of cyclohexane interconversion, M.A. Wilson and D. Chandler 149 (1990) 11

Luminescence spectra, yields and lifetimes

- Photochemical bleaching of adsorbed rhodamine 6G as a probe of binding geometries on a fused silica surface, A.L. Huston and C.T. Reimann 149 (1991) 401

*Reactions (including dissociation)**-gas phase*

- Absolute rate constants of R+NO(+M)→RNO(+M) reactions (R=C₃F₇, CF₃, CH₃) at T=295 K measured by time-resolved intracavity absorption of He-Ne laser radiation, A.B. Vakhtin and A.K. Petrov 149 (1991) 427

-condensed phase

- Molecular dynamics study of cyclohexane interconversion, M.A. Wilson and D. Chandler 149 (1990) 11
Ultrafast studies of chemical reactions in liquids: validity of gas phase vibrational relaxation models and density dependence of bound electronic state lifetimes, M.E. Paige and C.B. Harris 149 (1990) 37
Fundamental aspects of chemical kinetics in condensed phases, J.G. Harris and F.H. Stillinger 149 (1990) 63
A photodynamical model for the excited state electron transfer of bianthryl and related molecules, T.J. Kang, W. Jarzeba, P.F. Barbara and T. Fonseca 149 (1990) 81
Quantum simulation of non-separable vibrations and Franck-Condon overlap: ground state and low excited states, O. Heitzsch and W. Lorenz 149 (1991) 353

-photochemical

- Some evidence of ultrafast H₂O⁺-water molecule reaction in femtosecond photoionization of pure liquid water: influence on geminate pair recombination dynamics, Y. Gauduel, S. Pommeret, A. Migus and A. Antonetti 149 (1990) 1
A spectroscopic and photo-electrochemical investigation of xanthene dyes incorporated in Langmuir-Blodgett films, B. Verschueren, M. Van der Auweraer and F.C. De Schryver 149 (1991) 385

Tunnelling

Quantum simulation of non-separable vibrations and Franck-Condon overlap: ground state and low excited states, O. Heitzsch and W. Lorenz

149 (1991) 353

Electron transfer

Ultrafast studies of chemical reactions in liquids: validity of gas phase vibrational relaxation models and density dependence of bound electronic state lifetimes, M.E. Paige and C.B. Harris

149 (1990) 37

A photodynamical model for the excited state electron transfer of bianthryl and related molecules, T.J. Kang, W. Jarzeba, P.F. Barbara and T. Fonseca

149 (1990) 81

A theoretical study of the effect of charge recombination on the transfer and trapping of excitation energy in photosynthesis, B. Källerbring and Ö. Hansson

149 (1991) 361

Ionization (including Rydberg states)

Ab initio calculations of molecular and electronic structure of disilane. II. Photoelectron and vacuum UV electronic spectra, M. Gelizé, A. Dargelos, A. Márquez and J. Fernández Sanz

149 (1991) 319

Ab initio study of the cyclic, bridge-bonded and terminal-bonded isomers of P_4S , P.J. Bruna and S.D. Peyerimhoff

149 (1991) 325

Molecular motion (including diffusive)

NMR deuteron relaxation study of low-dimensional effects in molecular liquids in restricted geometries, G. Liu, M. Mackowiak, Y. Li and J. Jonas

149 (1990) 165

The mechanical spectra of β -relaxation and spontaneous densification effects in an amorphous polymer, E. Muzeau and G.P. Johari

149 (1990) 173

Diffusion, viscosity and structural slowing down in soft sphere alloys near the kinetic glass transition, J.-L. Barrat, J.-N. Roux and J.-P. Hansen

149 (1990) 197

Dynamical correlations in a binary metastable fluid, J. Ullo and S. Yip

149 (1990) 221

Collective motion and excitations

Diffusion, viscosity and structural slowing down in soft sphere alloys near the kinetic glass transition, J.-L. Barrat, J.-N. Roux and J.-P. Hansen

149 (1990) 197

Neutron and light scattering study of relaxation dynamics in a glass-forming fragile molecular liquid, L. Börjesson, M. Elmroth and L.M. Torell

149 (1990) 209

Impulsive stimulated scattering study of normal and supercooled liquid triphenylphosphite, S.M. Silence, S.R. Goates and K.A. Nelson

149 (1990) 233

Surface effects and catalysis

Catastrophes and classical surface scattering, T.C.M. Horn, A.W. Kleyn and B. Dijkhuis

149 (1991) 275

Photochemical bleaching of adsorbed rhodamine 6G as a probe of binding geometries on a fused silica surface, A.L. Huston and C.T. Reimann

149 (1991) 401

Thermodynamic and transport properties

RISM theory of polymer liquids: analytical results for continuum models of melts and alloys, K.S. Schweizer and J.G. Curro

149 (1990) 105

The structure and thermodynamics of protein-SDS complexes in solution and the mechanism of their transports in gel electrophoresis process, X.-H. Guo and S.-H. Chen

149 (1990) 129

Dynamical correlations in a binary metastable fluid, J. Ullo and S. Yip	149 (1990) 221
<i>Structure of solids and liquids</i>	
Fundamental aspects of chemical kinetics in condensed phases, J.G. Harris and F.H. Stillinger	149 (1990) 63
RISM theory of polymer liquids: analytical results for continuum models of melts and alloys, K.S. Schweizer and J.G. Curro	149 (1990) 105
<i>Critical phenomena</i>	
Wetting transitions and surface critical phenomena at solid–fluid interfaces, W.C. Kung, L.E. Scriven and H.T. Davis	149 (1990) 141
Neutron and light scattering study of relaxation dynamics in a glass-forming fragile molecular liquid, L. Börjesson, M. Elmroth and L.M. Torell	149 (1990) 209
<i>Phase transitions</i>	
Phase equilibria of polymer-containing droplet microemulsions, J.T. Brooks and M.E. Cates	149 (1990) 97
RISM theory of polymer liquids: analytical results for continuum models of melts and alloys, K.S. Schweizer and J.G. Curro	149 (1990) 105
Wetting transitions and surface critical phenomena at solid–fluid interfaces, W.C. Kung, L.E. Scriven and H.T. Davis	149 (1990) 141